

What is claimed is:

1. A process for producing sustained-release particles comprising:
  - a) dispersing a core material in a mixer capable of mixing and heating said core material above 110°F, while adding a naturally derived animal or vegetable oil with a melting point above 110°F to the mixer until fully melted; b) mixing the molten oil with the core material until encapsulation; c) cooling said encapsulated material and discharging.
2. The process of claim 1 wherein the core material is selected from ; ace-inhibitors; anti-anginal drugs; anti-arrhythmias; anti-asthmatics; anti-cholesterolemics; anti-convulsants; anti-depressants; anti-diarrhea preparations; anti- histamines; anti-hypertensive drugs; anti-infectives; anti-inflammatory agents; anti-lipid agents; anti-manics; anti-nauseants; anti-stroke agents; anti-thyroid preparations; anti-tumor drugs; anti-tussives; anti- uricemic drugs; anti-viral agents; acne drugs; alkaloids; amino acid preparations; anabolic drugs; analgesics; anesthetics; angiogenesis inhibitors; antacids; antiarthritics; antibiotics; anticoagulants; antiemetics; antiobesity drugs; antiparasitics; antipsychotics; antipyretics; antispasmodics; antithrombotic drugs; anxiolytic agents; appetite stimulants; appetite suppressants; beta blocking agents; bronchodilators; cardiovascular agents; cerebral dilators; chelating agents; cholecystokinin antagonists; chemotherapeutic agents; cognition activators; contraceptives; coronary dilators; cough suppressants; decongestants; deodorants; dermatological agents; diabetes agents; diuretics; emollients; enzymes; erythropoietic drugs; expectorants; fertility agents; fungicides; gastro-intestinal agents; growth regulators; hormone replacement agents; hyperglycemic agents; hypnotics; hypoglycemic agents; laxatives; migraine treatments; mineral supplements; mucolytics; narcotics; neuroleptics; neuromuscular drugs; NSAIDS; nutritional additives; peripheral vaso-dilators; polypeptides; prostaglandins; psychotropics; renin inhibitors; respiratory stimulants; steroids; stimulants; sympatholytics; thyroid

preparations; tranquilizers; uterine relaxants; vaginal preparations; vaso- constrictors; vago- dilators; vertigo agents; vitamins; wound healing agents, botanical substances, fungicides, and fertilizers.

3. The process of claim 1 wherein the animal or vegetable oil is a vegetable oil with a melting point between 120 degrees F and 200 degrees F.
4. The process of claim 1 wherein the animal or vegetable oil is a hydrogenated soy oil with a melting point of about 160 degrees F.
5. The process of claim 1 wherein the range of oil used is about 3% to 50% by weight in the finished particle.
6. The process of claim 1 wherein the range of oil is about 3% to 20% by weight in the finished particle.
7. The process of claim 1 wherein the range of oil is about 3% to 10% by weight in the finished particle.
8. The process of claim 1 wherein a high shear/high intensity mixer such as a Littleford mixer with a heating jacket is employed and the heat generated by the energy input is sufficient to melt the oil. *indefinite*
9. The process of claim 1 wherein a plow type mixer fitted with a heating jacket, tank, and heated lines to spray the oil is employed.
10. The process according to claim 1 further comprising a sugar or a mineral.
11. The process of claim 8 wherein the sugar is present in the melt from 1-30% by weight of finished particles.

12. The process of claim 8 wherein the sugar is present in the melt from 5-20% by weight of finished particles.
13. The process of claim 8 wherein the sugar is present in the melt at about 10% by weight of the finished particles.
14. The process of claim 8 wherein the sugar is selected from the following; sucrose, dextrose, lactose, polydextrose, maltodextrin, and maltose.
15. The process of claim 8 wherein the mineral is present in the melt from 1-20% by weight of the finished particles.
16. The process of claim 8 wherein the mineral is present in the melt from 5-10% by weight of the finished particle
17. The process of claim 8 wherein the mineral is present in the melt at about a 5% level and is calcium carbonate.
18. A solid sustained-release pharmaceutical composition comprising; a) a therapeutic agent, biological substance, fungicide or fertilizer as the core material, and b) an animal or vegetable oil with a melting point above 110 degrees F.
19. The composition according to claim 16 wherein the oil is present from 5-30% by weight in the finished particle.
20. The composition of claim 16 wherein the oil is present from 3-10% by weight in the finished particle.
21. The composition of claim 16 wherein the oil is present at a 5% level by weight in the finished particle.

22. The composition of claim 16 wherein the oil has a melting point of 110-200 degrees F.
23. The composition of claim 16 wherein the oil has a melting point of 120-180 degrees F.
24. The composition of claim 16 wherein the oil has a melting point of 160 degrees F.
25. The composition of claim 16 wherein the oil is a hydrogenated vegetable oil with a melting point above 110 degrees F.
26. The composition of claim 23 wherein the oil is hydrogenated soy oil with a melting point range of about 145-160 degrees F.
27. The composition of claim 16 wherein the core substance is selected from the following;  
A drug, nutritional agent, botanical substance, biological substance, fungicide, or fertilizer.
28. The composition of claim 25 wherein the drug or nutritional agent is selected from ; ace-inhibitors; anti-anginal drugs; anti-arrhythmias; anti-asthmatics; anti-cholesterolemics; anti-convulsants; anti-depressants; anti-diarrhea preparations; anti- histamines; anti-hypertensive drugs; anti-infectives; anti-inflammatory agents; anti-lipid agents; anti-manics; anti-nauseants; anti-stroke agents; anti-thyroid preparations; anti-tumor drugs; anti-tussives; anti-uricemic drugs; anti-viral agents; acne drugs; alkaloids; amino acid preparations; anabolic drugs; analgesics; anesthetics; angiogenesis inhibitors; antacids; antiarthritics; antibiotics; anticoagulants; antiemetics; antiobesity drugs; antiparasitics; antipsychotics; antipyretics; antispasmodics; antithrombotic drugs; anxiolytic agents; appetite stimulants; appetite suppressants; beta blocking agents; bronchodilators; cardiovascular agents; cerebral dilators; chelating agents; cholecystokinin antagonists; chemotherapeutic agents; cognition activators; contraceptives; coronary dilators; cough suppressants; decongestants; deodorants; dermatological agents; diabetes agents; diuretics; emollients; enzymes; erythropoietic drugs; expectorants; fertility agents; fungicides; gastro-intestinal agents; growth regulators; hormone replacement agents; hyperglycemic agents; hypnotics; hypoglycemic agents; laxatives; migraine treatments; mineral supplements; mucolytics; narcotics; neuroleptics;

neuromuscular drugs; NSAIDS; nutritional additives; peripheral vaso-dilators; polypeptides; prostaglandins; psychotropics; renin inhibitors; respiratory stimulants; steroids; stimulants; sympatholytics; thyroid preparations; tranquilizers; uterine relaxants; vaginal preparations; vaso- constrictors; vago-dilators; vertigo agents; vitamins; wound healing agents.

29

27. The composition of claim 25 wherein the drug, nutritional, or botanical substance is selected from the following; niacin, L-arginine, creatine monohydrate, L-carnitine, aspirin, loratidine, lovastatin, vitamin C, garlic powder, polygonum cuspidatum root extract, astaxanthin, tocotrienol or co-enzyme Q-10.

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a1

add  
B1

add  
C1

add  
D2d